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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,274	01/16/2002	Nadarajah Asokan	4208-4059	3145
27123	7590	10/05/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			SZYMANSKI, THOMAS M	
			ART UNIT	PAPER NUMBER
			2134	
DATE MAILED: 10/05/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/046,274

Applicant(s)

ASOKAN ET AL.

Examiner

Thomas Szymanski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/16/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/6/03, 5/3/05</u> | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-22 have been examined.

#### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The applicant is requested to review the specification and update the status of all co-pending applications made mention of, replacing attorney docket numbers with current U.S. application or patent numbers when appropriate. References to U.S. applications or patents should make it clear as to what the number refers (e.g. U.S. Patent No. #), instead of listing only the number.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-6, 9-10, 12, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al U.S. Patent No. 6,018,717.
6. Regarding Claims 1 and 20: A secure module and a first storage device (Fig 2.64 Col 5 line 64 - Col 6 line 15) As shown the security card within the terminal is a secure module that contains storage.

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Second storage device (Fig 1.16)

Third storage device (Fig 1.20)

Processor (Fig 2, Col 5 line 64 - Col 6 line 15) The card contains a processor for authenticating transactions.

Authenticate second storage device by secure module (Fig 3-7, Col 5 line 64 - Col 6 line 15) As shown within the figures and the stated lines the second storage device is authenticated with the consumer card as it is an inclusive part therein.

Request a counter value from second storage device (Fig 5-7, Col 5 line 64 - Col 6 line 22, Col 16 lines 35-57) The access device requests a counter value (i.e. currency/token amount) from the card and this sent back to the access device for final authorization.

Writing secure state information and counter value to third storage device (Col 16 lines 35-57) When finally authenticated and as noted the debit command must change the value that is stored within the memory of the third storage device of the card, thereby writing the information about the transaction back to the third storage.

Cryptographic transform (Fig 1.24, Col 16 lines 35-57)

7. Regarding Claim 3: First storage is a ROM (Fig 2.64, Fig 1.18, Col 4 line 65 – Col 5 line 10, Col 5 lines 64-67) As exemplified by the card of figure 1 the first storage is contained on a security card that operates in the same manner by using the provided operating system located on the ROM to perform its functions.

8. Regarding Claim 4: Second and third storage devices are external, read-write memory devices (Fig 1.16.20, Col 4 line 65 – Col 5 line10)

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9. Regarding Claim 5: First and second memory devices are tamper resistant memory (Fig1, Fig 2, Col 5 line 64 - Col 6 line 15) As taught the first memory is contained within a secured card, and additionally the second is contained within an electronic card similar to the first.
10. Regarding Claim 6: Second and third storage are removable electronic card (Fig 1 Col 4 line 65 – Col 5 line10)
11. Regarding Claim 9: Third memory is an insecure storage device (Fig 1.20)
12. Claims 14-18 are a method implementation of claims 1, 3-6, 9 and as such are rejected on the same basis.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al U.S. Patent No. 6,331,972, and further in view of Lee et al U.S. Patent No. 6,018,717.
15. Lee et al teaches the use of a smartcard with another electronic device for the purpose of storage and authentication but fails to teach the involved electronic device as a personal communication device.
16. Harris et al teaches the use of a personal communication device and authorization of usage of such a device.

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17. It is desirable within any system to have authentication capabilities, but when those services are slow it can be cumbersome (Harris Col 1 lines 34-50, Col 2 lines 5-11). Therefore, any means that can provide better efficiency in this process is always an added advantage. Furthermore within a portable device storage is always at a premium so the ability to provide additional storage is a desirable attribute (Lee Col 1 lines 12-20, 53-67).

18. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the system of Harris et al with that of Lee et al for the advantages of added portable storage and increased efficiency in authenticating as could be provided by implementing the smart card system of Lee et al into the portable device of Harris et al.

19. Regarding Claims 1 and 20: A secure module and a first storage device (Lee Fig 2.60, 40 2.68, 2.66, 1.18, Col 6 lines 15-17, Harris Fig 26) Within the combination of these two systems some of the systems of Lee are incorporated into the personal communication device of Harris et al. as is necessary for the functionality of the combination. In this case the secure module is connotated by the access device and terminal. This terminal by its nature is a secure module as in order to be able to authenticate any system it must be secure and authentic itself.

Second storage device (Lee Fig 1.16) As shown the card contains storage

Third storage device (Lee Fig 1.20) As shown the card contains storage

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Processor (Harris Fig 26, Lee Fig 1, 2, 3) The system of the combination contains Processors in both the personal communication device (PCD) and in the smartcard that are in communication with the various storage devices of the system.

Authenticate second storage device by secure module (Lee Fig 3, Col 7 lines 24-42, 55-62, Col 8 lines 33-44, Harris Fig 6) As stated the card, which the storage devices are a part, is authenticated via the terminal (secure module) which is the PCD.

Request a counter value from second storage device (Col 8 lines 33-44, Col 9 lines 52-64) Lee demonstrates that all of the information necessary is read from the card during the authentication process. As it can be seen the counter value information is necessary information for being able to know if the card is authenticate and still contains a valid state for authentication.

Writing secure state information and counter value to third storage device (Col 9 lines 52-64) Lee et al teaches incrementing a counter value within the memory of the card upon completion of authentication.

20. Regarding Claim 3: First storage device is a ROM (Harris Fig 26, Col 8 lines 35-45, 50-55, Lee Fig 2.68) It is well known within the art that the devices made of mention contain memory such as ROM

21. Regarding Claim 4: Second and third storage devices are external read-write memory devices (Lee Fig 1.16,20) It is clearly seen that the card is external to the PCD and the stated memories are of a type that is read-write that being RAM and Non-volatile.

22. Regarding Claim 5: First and second storage devices are tamper-resistant (Harris Fig 6, Lee Col 3 lines 50-55, 60-67, Fig 3-5) The first and second storage devices are resistant to any efforts of tampering since the user must be authenticated in order to access the information just the same as the terminal must have been authenticated before it is capable of accessing the cards information. Additionally, these devices are contained in a physical manner such as in the case of the terminal that prevents direct outside connection to these devices without disassembling the card or the PCD.

23. Regarding Claim 6: Second and Third storage devices are within a removable electronic card that is received by the personal communication device (Lee Fig 1.16, 1.20, Fig 3) The second and third storage as stated above are contained within the card and furthermore as denoted by the figure are received by the terminal (PCD).

24. Regarding Claims 7 and 8: Communication between the processor, secure module, second, and third storage devices comprises a plurality of protocols using an OS of the PCD (Lee Figs 3-9, Harris Figs 6, 10-38) As defined by The American Heritage dictionary a protocol is a standard for regulating data transmission between computers. Within the system of Lee and Harris there is a standard language that is understood for the communication of the two devices to transpire. This standard as is necessitated by the functions of the device provides for protocols that are designated as a create protocol for the generation of information, read for the instances of reading such information out of memory for authentication, and updating information such as currency values within the system.



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25. Regarding Claim 9: Third storage device is an insecure memory (Lee Fig 1.20, Col 1 lines 57-65) The non-volatile memory of the third storage device is considered insecure as such memory as EEPROM tends to degrade over its lifetime and has a tendency to lose data.

26. Regarding Claim 10: secured counter value is from the second storage device and encrypted using a cryptographic transform (Lee Figs 5-6, Col 6 lines 4-12, Col 10 lines 41-53, Col 11 lines 1-10, Table 1, lines 41-59, Col 12 lines 29-35, 39-45)

Communications between the card and system are encrypted as shown, thus providing for any of the information contained within a message sent to the other party to be encrypted using a cryptographic transform.

27. Regarding Claim 11: Personal communication device is a cellular telephone, satellite phone, PDA, or Bluetooth device (Harris Fig 3, Col 4 lines 23-29, Col 8 lines 35-45, 51-55, Col 14 lines 15-21)

28. Regarding Claim 21: Receiving a compliance certificate and public key from second storage (Lee Figs 5-6, Col 6 lines 4-12, Col 10 lines 41-53, Col 11 lines 1-10, Table 1, lines 41-59, Col 12 lines 29-35, 39-45)

Verifying the authenticity of certificate (Fig 6) As shown above the system provides for authentication via public key certificate authentication, which involves the authentication of a certificate and receiving a key in addition.

29. Regarding Claim 22: Receiving a success or failure indication from third storage device (Fig 5-6, Col 1 lines 40-67, Col 5 lines 35-42, Col 12 lines 50-61) Within the system the writing and changing of information into storage must be verified as within

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any such device within the art. Without verification of such an event the system would not be able to function in the required manner since writing an update for instance back to the card must occur when a debit is performed if the user removes the card before verification then they could essentially fool the card every time and never experience a reduction in the amount on the card. As it can be seen from this example and those parts cited the system provides for a verification of success or failure.

30. Claims 12, 14-19 are a method implementation of claims 1, 3-11 and as such are rejected on the same basis.

31. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al U.S. Patent No. 6,331,972, and Lee et al U.S. Patent No. 6,018,717, as in claim 1 above and further in view of Kamel U.S. Patent No. 6,009,150.

32. Harris et al and Lee et al teach a system as in claim 1 that uses a PIN (Lee Col 1 lines 53-67), but does not explicitly state tracking the number of attempts to correctly enter the PIN.

33. A high level of security is an advantageous feature within any computer system. Furthermore, the detection and aversion of an attempt to access the system by an unauthorized user is even further desirable. (Lee Col 1 lines 53-67, Kamel Col 5 lines 5-20)

34. Kamel teaches the implementation of a counter for the determination of the number of attempts to enter a PIN. Kamel teaches that this is an advantageous feature

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so that a malicious user cannot use a brute force method of repeated guessing to obtain entry into the system. (Figs 2A-C, Col 4 lines 45-67, Col 5 lines 1-15)

35. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the system of Harris et al and Lee et al in claim 1 above with that of Kamel for the added advantages of improved security as stated above.

### ***Conclusion***

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of art disclosed by the references cited and the objections made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).

37. Inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas M. Szymanski who can be reached at (571) 272-8574. The examiner's normal working schedule is between the hours 8:00am – 4:30pm (EST), Monday – Friday.

38. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached at (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

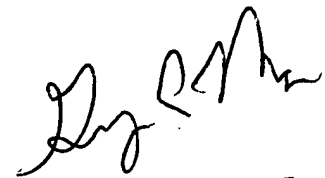
Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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